



## PATENT ABSTRACTS OF JAPAN

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(54) CYPRIDINACEA LUCIFERIN DERIVATIVE AND  
DETERMINATION OF SACCHARIDE  
HYDROLASE

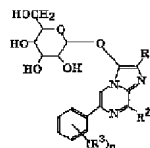
## (57) Abstract:

**PURPOSE:** To obtain the subject new compound as a specific derivative from Cypridinacea luciferin, capable of making itself luminous as a substrate for saccharide hydrolase such as  $\alpha$ -D-galactosidase, thus useful for determination, immunoassay, etc., of saccharide hydrolase.

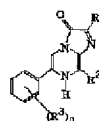
**CONSTITUTION:** This new Cypridinacea luciferin derivative is expressed by formula I ( $R^1$  and  $R^2$  are each H, a 1-20C alkyl, 6-20C aryl or 7-19C arylalkyl;  $R^3$  is a 1-5C alkyl or alkoxy; (n) is an integer of 0-5), which can make itself luminous as a substrate for saccharide hydrolase such as  $\alpha$ -D-galactosidase, thus is useful for saccharide hydrolase determination, enzyme immunoassay by luminescent technique. The new compound is obtained by reaction between an imidazopyrazine derivative of formula II and a saccharide derivative of formula III (X is a halogen;  $R^4$  is a 1-7C acyl) in the presence of silver trifluoromethanesulfonate and disodium phosphate to form a new intermediate of for-

mula IV, which is then subjected to solvolysis in the presence of an alkali.

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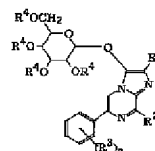
I



II



III



IV